



Missouri Department of Health and Senior Services

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Specimen Submission Instructions for Rickettsial Testing
MO State Public Health Laboratory

The Missouri State Public Health Laboratory (MSPHL) does not perform laboratory testing for rickettsial disease at this time. Specimens for rickettsial disease testing received by the MSPHL will be referred to the CDC in Atlanta, GA.

1. Patients should have a clinical or epidemiologic history reasonably suggestive of rickettsial disease. Random rickettsial testing of clinically difficult cases rarely identifies rickettsial pathogens as possible etiologic agents.
2. All specimens must be accompanied by a CDC Specimen Submission Form (CDC 50.34). Separate forms should be submitted for each test request (i.e. serology, PCR, immunohistochemistry). This form should include the following information:

- Patient name, sex, and birth date
- Date of onset of illness
- Date of specimen collection
- Type of specimen (e.g., serum, whole blood, tissue, etc.)
- Brief medical history (including antibiotic therapy and dates)
- Brief travel and animal contact history
- Submitting physician/organization/ complete return address and contact numbers.

CDC 50.34 is available at http://www.cdc.gov/ncidod/dvbid/misc/CDC50_34.pdf

3. All samples must be sent through the MSPHL. Specimens sent directly to the CDC without prior approval will not be accepted
4. Diagnosis of acute infection is best done by PCR testing. Whole blood (EDTA) is the preferred specimen type for Ehrlichia diagnosis. If RMSF is suspected, skin punch biopsies may be taken at the rash site. In all cases specimens should be collected before antibiotic therapy is started.
5. Paired serum specimens will be tested by Indirect Fluorescent Antibody (IFA). The acute specimen should be collected within 7 days of onset and the convalescent 2-3 weeks after acute sample was drawn. We cannot overemphasize the need for paired serum specimens to provide the most diagnostic information in serology. Acute serums will be held at the SPHL until a convalescent serum is received.
6. If a patient is deceased and a Rickettsial disease is suspected, CDC requests autopsy specimens for testing. Serum is not useful since a convalescent specimen will not be available. Immunohistochemical methods should be employed to provide diagnosis on formalin-fixed, paraffin-embedded tissues.
7. Serum samples or fresh tissue may be submitted refrigerated on cold packs or frozen on dry ice. EDTA blood should be sent refrigerated and not frozen. Fresh tissue for PCR can be sent on sterile gauze pads moistened with sterile saline in a collection cup, and may be sent on cold packs or frozen at – 70 °C. Fixed tissue should be sent at room temperature.

Please refer to <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5504a1.htm> for additional information.

www.dhss.mo.gov

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